CASE STUDY

Farm background – the people

David grew up in a dairy farming family and came home from Ag college in 1996 to work on the family farm. In 1997, David started on the current family farm in the Darling Downs, milking 120 cows. David and Robyn took over management in 2000 and built a new dairy in 2002, with the dream to milk 250–300 cows and a commitment to an intensive feeding system. Since then, there has been continual growth in cow numbers with the milking herd currently about 450–500 cows. There are five paid employees, plus the owners’ labour. Their children are getting close to finishing secondary school.

There was a gradual transition in ownership of the business with David and Robyn buying assets in stages and David’s parents providing some vendor finance at times. Since 2000/01, David and Robyn’s Net Worth has grown from $1.5M to over $5M.

Farm description – at a glance

<table>
<thead>
<tr>
<th>Farm details</th>
<th>Farm system</th>
<th>Farm performance ($)</th>
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</thead>
<tbody>
<tr>
<td>People: David and Robyn and generally 5 employees</td>
<td>Total Mixed Ration system</td>
<td>EBIT per kg MS $1.96 average with a range of $1.06–$3.00 over the past 4 years</td>
</tr>
<tr>
<td>Land area: 980ha useable (includes 274ha leased land, leased area has varied over the years)</td>
<td>Herd type: Predominantly Friesian</td>
<td>ROTA 6% average, with a range of 4–8% over the past 4 years</td>
</tr>
<tr>
<td>Average rainfall: 630mm (long-term)</td>
<td>Herd number: 520</td>
<td>Proportion of homegrown feed in the diet 42% (26%–56%)</td>
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<tr>
<td>No irrigation</td>
<td>Year-round calving pattern</td>
<td>590kg Milk solids/cow (543–616)</td>
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<td></td>
<td>Concentrate feeding, including by-products</td>
<td>Production % liveweight 98 (90–102)</td>
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that enough extra milk is produced to cover the extra
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Tactical decisions
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at a high level, but carefully monitor responses to ensure
that enough extra milk is produced to cover the extra
cost and increase profit. When fodder reserves looked like
running low in the drought, they culled early and heavily
to manage risk. They do a fair bit of scenario planning/
feed budgeting typically with a planning horizon of about
3 months.
They prefer to start making decisions early, while they
still have a range of options available. For example, they
didn't wait until the silage was getting close to running
out before they started culling cows in the drought
Risk
They see running out of fodder is a key risk to their
business, so they try to have at least 18 months of feed
in storage after they harvest the summer crop. They
lease 240ha of cropping land to grow additional fodder.
They will purchase additional silage and store it, if it
is good value. In the 2017/18 drought, they continued
to purchased by-products (even when prices rose) to
maintain a reserve of fodder, which kept becoming even
more expensive and difficult to source.
Having a market for their product is a risk that most
businesses face. However, they feel comfortable that with
the deficit between milk production and consumption in
their region, there will continue to be demand for their milk
and hence they are in a good position to handle this risk.
Grain price is a risk to their business, and they tend to
lock in contract prices to avoid too much exposure to
fluctuations.
Physical monitoring
They place a lot of emphasis on observation, look at the
milk vat, look at the feed trough to see if any is left behind,
look for hungry cows and unhealthy cows.
Business analysis tools
They have been involved in the Queensland Dairy
Accounting Scheme (QDAS – similar to the Dairy Farm
Monitor Program) for a number of years and find the
process of sitting down, reviewing and reflecting on the
last year useful, before planning for the next year. They
don’t do a formal cash-flow budget, just regularly monitor
bank statements and provide the bank with the QDAS
report as an update on the financial position each year.
Evolution of their business
They say their business has evolved over time “by making
lots of mistakes”. They have tended to push to increase
production (giving a fair bit of attention to the cow
nutrition) and then use the additional income to help fund
the next farm development project. Since 2000/01, David
and Robyn’s Net Worth has grown from $1.5M to over $5M.
They see debt as necessary to enable growth and
development but, like to keep it to manageable levels
and hence they are in a good position to handle this risk.
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The story
Farm system
They run a Total Mix Ration (TMR) system. They purchase
all the grain and also purchase by-products when the
opportunity is favourable. They aim to grow all the
fodder required but, will purchase silage/hay if a good
opportunity arises. The focus of their fodder production
is to generate a large quantity of silage. They then
balance the ration with the grain and by-products. They
predominantly grow sorghum, as it is a reliable option
that suits their soil types and dryland system. It is difficult
to grow high quality pastures in their region without
irrigation, so their resource base leant itself better to a
TMR system. Also, their close proximity to grain growing
areas keeps the cost of transporting grain down.
The annual rainfall was well below the long-term
average in all of the last four years that were analysed.
The proportion of homegrown feed varied from 36% to
56%, which was related to rainfall and the amount of
land leased.
The herd are predominantly Friesian with a year-round
calving system. They use bulls for joining and don’t AI,
which they find works well with the year-round calving.
They are happy with the genetic makeup of the herd.
While the feed costs can vary markedly between years,
the feed costs in their TMR system don’t generally vary
from one time of the year to another within years. Hence,
their milk payment system would need to change before
they are likely to consider moving from their year-
round calving pattern. There are periods of the year
when it is humid/hot and it is more difficult to maintain
milk production, but they are more likely to invest in
infrastructure to cool the cows and maintain production,
than to change the calving pattern to combat this.

Tactical decisions
They do monitor the cost of their ration closely. They keep
regular contact with their nutritionist (generally remotely)
to balance the ration. As the milk price is typically about
68 c/L, they generally maintain supplementary feeding
at a high level, but carefully monitor responses to ensure
that enough extra milk is produced to cover the extra

KEY TAKE HOME MESSAGES

Optimise (make the most of) the unique set
of resources that you have available.
Make decisions early to manage risk and
avoid exposure to the fodder market in
drought periods, when it is expensive.
Use debt as necessary to enable growth and
development but, keep it to manageable
levels and invest in options that allow
you to pay it down over time.

Involve staff in planning.
What’s next?
They did have a 10 year plan when they started but, they have basically achieved all those goals and it is probably time to revisit this. Their children are approaching the end of high school and may want to return to the farm at some stage. The current infrastructure is a limitation to further increases in herd size at the moment but, there is still potential for further expansion in the longer-term.

They have a picture in their heads of where they want to get to but, it isn’t written down.

The numbers behind the story

### Farm details

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<tbody>
<tr>
<td>Milking Cow Numbers</td>
<td>510</td>
<td>525</td>
<td>540</td>
<td>530</td>
</tr>
<tr>
<td>Total useable area (ha)</td>
<td>1,367</td>
<td>1,367</td>
<td>885</td>
<td>981</td>
</tr>
<tr>
<td>Rainfall (mm)</td>
<td>580</td>
<td>505</td>
<td>446</td>
<td>481</td>
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### Primary indicators

#### Business Efficiency

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<tbody>
<tr>
<td>EBIT per kg Milk Solids ($)</td>
<td>3.00</td>
<td>2.29</td>
<td>1.06</td>
<td>1.49</td>
</tr>
<tr>
<td>Return on Total Assets managed %</td>
<td>8.3</td>
<td>7.2</td>
<td>4.1</td>
<td>5.6</td>
</tr>
<tr>
<td>Return on Equity %</td>
<td>13.2</td>
<td>10.7</td>
<td>4.3</td>
<td>6.3</td>
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### Secondary Indicators

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<tbody>
<tr>
<td>Milk price ($/kg MS)</td>
<td>8.25</td>
<td>8.30</td>
<td>8.98</td>
<td>9.78</td>
</tr>
<tr>
<td>Total Variable Costs ($/kg MS)</td>
<td>4.64</td>
<td>5.42</td>
<td>7.31</td>
<td>7.30</td>
</tr>
<tr>
<td>Total Feed Costs ($/kg MS)</td>
<td>4.15</td>
<td>5.00</td>
<td>6.83</td>
<td>6.97</td>
</tr>
<tr>
<td>Homegrown Feed Costs ($/t DM)</td>
<td>72</td>
<td>63</td>
<td>192</td>
<td>117</td>
</tr>
<tr>
<td>Total Labour Costs (paid plus imputed) ($/kg MS)</td>
<td>1.53</td>
<td>1.37</td>
<td>1.18</td>
<td>1.42</td>
</tr>
<tr>
<td>Cost of Production (including inventory changes) ($/kg MS)</td>
<td>7.87</td>
<td>7.57</td>
<td>9.35</td>
<td>10.34</td>
</tr>
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### Tertiary indicators

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<tbody>
<tr>
<td>Milk solids as a % of Cow liveweight</td>
<td>90</td>
<td>100</td>
<td>103</td>
<td>100</td>
</tr>
<tr>
<td>Proportion of homegrown feed in the diet (%)</td>
<td>52</td>
<td>56</td>
<td>36</td>
<td>26</td>
</tr>
<tr>
<td>Homegrown feed consumed (t DM) per 100mm rainfall</td>
<td>0.35</td>
<td>0.57</td>
<td>0.29</td>
<td>0.46</td>
</tr>
<tr>
<td>Milk solids per Labour Unit</td>
<td>34,614</td>
<td>39,453</td>
<td>48,916</td>
<td>46,757</td>
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</tbody>
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